

Amendments to the Claims

The following listing of the claims will replace all prior versions, and listings of the claims in the application:

Listing of Claims

Claims 1-8 Canceled

9. (new) A method of image transforming, comprising the steps of:

generating from an original image having a plurality of original picture elements, a new picture element from the plurality of original picture elements that are neighboring, and forming a first transformation image by arranging the new picture element among the plurality of original picture elements;

dividing the original image into a plurality of first regions each having picture elements, searching respective second regions each having picture elements corresponding to the picture elements in the first region, and forming a second transformation image by transforming the picture elements in the first region into the picture elements in the second region;

comparing values of respective picture elements in respective corresponding regions of the first transformation image and the second transformation image; and

on the basis of the comparison result, deciding to output either the region in the first transformation image or the region in the second transformation image.

10. (new) The image transforming method according to claim 9, wherein values of the picture elements of the region in the first transformation image are compared with values of the picture elements of the corresponding region in the second transformation image, and the difference between the value in the first transformation image and the corresponding value in the second transformation image is calculated.

11. (new) The image transforming method according to claim 10, wherein, when the difference is bigger than a predetermined value, the picture element in the second region is transformed into the picture element in the first region.

12. (new) The image transforming method according to claim 10, wherein the difference is the level of high frequency components of the picture element.

13. (new) The image transforming method according to claim 9, wherein, when a first region corresponds to plural second regions, a second region is decided whose each picture element value is obtained by calculating an average of plural corresponding picture element values in the plural second regions.

14. (new) The image transforming method according to claim 9, wherein the original image is a color image.

15. (new) An apparatus for image transforming, comprising:

an interpolator for generating from an original image having a plurality of original picture elements, a new picture element from the plurality of original picture elements that are neighboring, and forming a first transformation image by arranging the new picture element among the plurality of original picture elements;

a fractal processor for dividing the original image into a plurality of first regions each having picture elements, searching respective second regions each having picture elements corresponding to the picture elements in the first region, and forming a second transformation image by transforming the picture elements in the first region into the picture elements in the second region;

a fractal filter for comparing values of respective picture elements in respective corresponding regions of the first transformation image and the second transformation image; and

on the basis of the comparison result, deciding to output either the region in the first transformation image or the region in the second transformation image.

16. (new) The image transforming apparatus according to claim 15, wherein values of the picture elements of the region in the first transformation image are compared with values of the picture elements of the corresponding region in the second transformation image, and the

difference between the value in the first transformation image and the corresponding value in the second transformation image is calculated.

17. (new) The image transforming apparatus according to claim 16, wherein, when the difference is bigger than a predetermined value, the picture element in the second region is transformed into the picture element in the first region.

18. (new) The image transforming apparatus according to claim 16, wherein the difference is the level of high frequency components of the picture element.

19. (new) The image transforming apparatus according to claim 15, wherein, when a first region corresponds to plural second regions, a second region is decided whose each picture element value is obtained by calculating an average of plural corresponding picture element values in the plural second regions.

20. (new) The image transforming apparatus according to claim 15, wherein the original image is a color image.

21. (new) A method of image transforming using the apparatus of claim 15, wherein the values of the picture elements of the region in the first transformation image are compared with values of the picture elements of the corresponding region in the second transformation image.
